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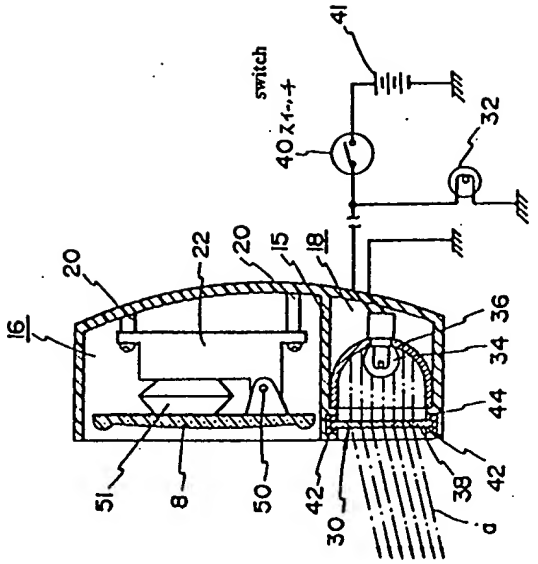
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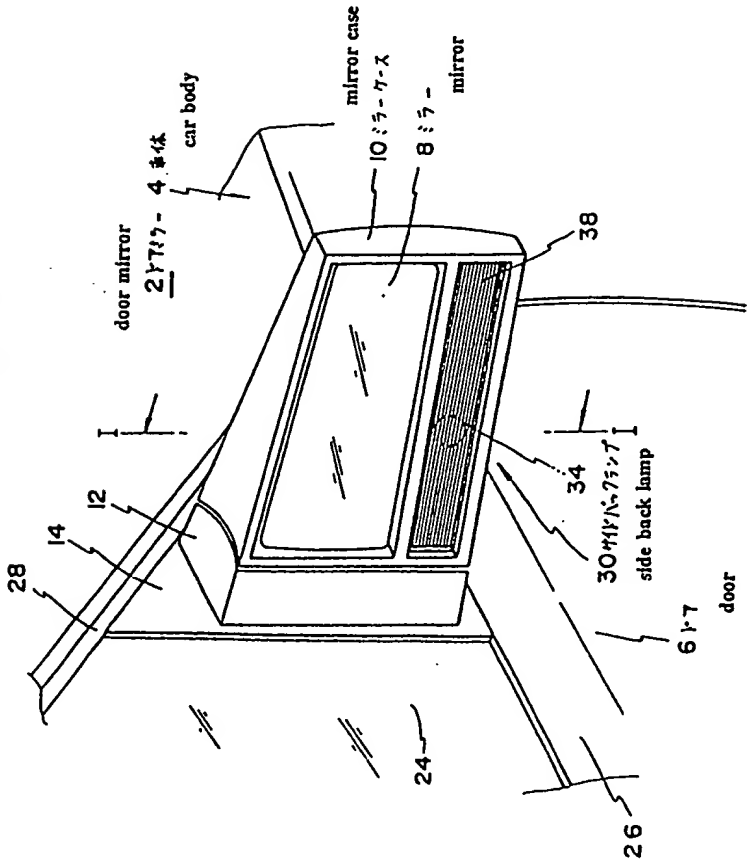
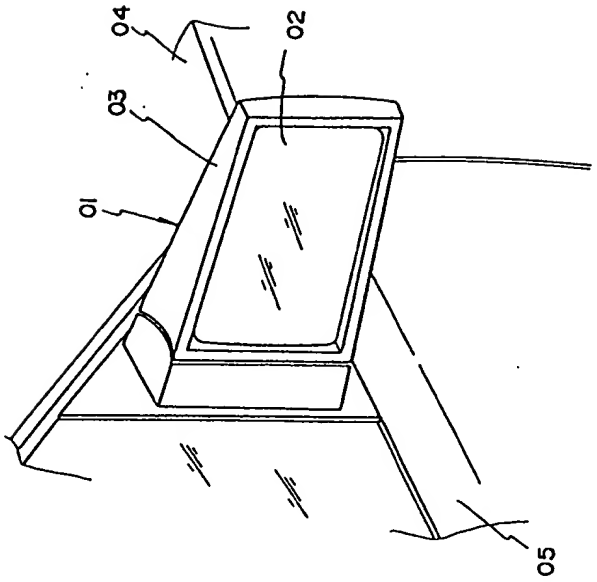
第1図


door mirror
2ドアミラー
4車体
car body
mirror case
10ミラーケース
8ミラー
mirror
38
34
30サイドバックランプ
side back lamp
12
14
28
6ドア
door
24
26

第4図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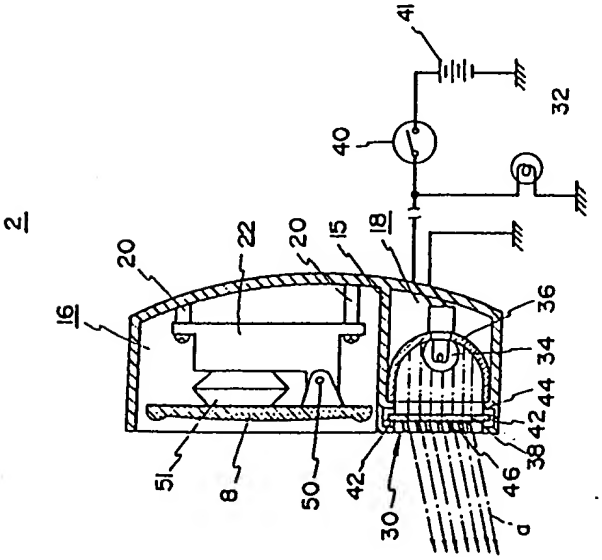
第3図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SPECIFICATION

1. TITLE OF THE INVENTION

Door mirror

2. WHAT IS CLAIMED IS:

1) Door mirror to be mounted on a car body and having a mirror and a mirror case, characterized in that said mirror case is provided with a side back lamp adapted to be turned on a light by actuating a switch and thereby to illuminate either side of a car body's rear part.

3. DETAILED DESCRIPTION OF THE INVENTION

(Technical Field)

The present invention relates to a door mirror to be mounted on a door of a car body.

(Prior Art)

The door mirror of prior art is exemplarily shown by Fig. 4 of the accompanying drawings.

The conventional door mirror 01 shown by Fig. 4 has a mirror 02 and a mirror case 03, and is adapted to be mounted on a door 05 of a car body 04.

This mirror allows a driver to check up the rear.

(Problem to be solved by the invention)

However, such door mirror of well known art has no

side back lamp and usually it is a back lamp to illuminate the rear around a bumper. Extent of illumination by the back lamp is limited to an area immediately behind the car body and there occurs a significant contrast of light and darkness around this extent of illumination, making it difficult for the driver to check up safety on either side of the car body's tail by means of the mirror.

To overcome such problem, the driver must open the door or window to check up ~~safety on driver's~~ side of the car body's tail and, on the side of assistant driver's seat, the driver must rely upon the assistant driver or leave the car to check up safety. Additionally, such check up of safety will be unreliable unless the interior lamp or flashlight is utilized.

Some of large-sized trucks or the like are provided on bottoms of their bodies in front of their rear wheels with side lamps adapted to illuminate around the rear wheels always during the nighttime (being traveling) so that a passer-by may be prevented from being caught under the wheels due to relatively large differential turning trace of their front and rear inside wheels.

However, for the car of which the differential turning trace of front and rear inside wheels is relatively small such as minicar or medium-sized car, such side lamp always put on a light during the nighttime and, if they are provided with such side lamps, problems as following will be encountered.

First, if the side lamp is mounted on the bottom of the car body, the side lamp will be apt to be damaged by bounding stones, irregularities on a road surface or the

like, since a distance between the bottom of the car body and the road surface is relatively small for mini- or medium-sized car.

Second, the door mirror laterally projecting from the car body is dangerous because a possibility of contacting any person or any physical solid may damage such person or physical solid or the door mirror itself and undesirable also in view of its appearance.

(Measure to solve the problem)

Accordingly, it is an object of the invention to solve the problem as has been described.

The object set forth above is achieved, according to the invention, by a door mirror to be mounted on a car body and having a mirror and a mirror case, characterized in that said mirror case is provided with a side back lamp adapted to be turned on a light by actuation of a switch and thereby to illuminate either side of a car body's rear part.

(Operation of the invention)

In this manner, the door mirror according to the invention allows the driver to turn the side back lamp on a light by means of actuating the switch so as to illuminate either side of the car body's tail and thereby to check up safety on either side by means of the door mirror even in darkness during the nighttime.

(EMBODIMENT)

The invention will now be described with reference to the accompanying drawings which illustrate specific

embodiments of the invention. For clarity the invention will now be described as embodied in a door mirror for ordinary passenger car.

Referring to Figs. 1 and 2, a first embodiment of the invention will be described.

Reference numeral 2 designates a door mirror according to the first embodiment, which is mounted on a door 6 of a car body 4 and comprises a mirror case 10 carrying a mirror 8, a mirror stay 12 and a corner piece 14.

While said door mirror 2 is provided on each side of the car body 4, only the door mirror 2 on the right side of the car body 4 is illustrated and described, since the door mirror 2 on the left side is the mirror image of the door mirror 2 on the right side of the car body 4.

Said mirror case 10 is divided by a partition 15 formed integrally with the case 10 into a mirror chamber 16 and a lamp chamber 18. Said mirror chamber 16 is formed on its inner surface with a mounting base 20 for a mirror angle regulator unit 22 containing therein an electric motor and this mirror angle regulator unit 22 carries thereon said mirror 8.

Reference numeral 50 designates a rotatable shaft for mirror angle regulation and reference numeral 51 designates a cover for a transmission member driven by the mirror angle regulating electric motor to change an angle of the mirror.

Said corner piece 14 is fixed to a door's outer panel 26 and a sash 28 at a front corner of a window 24 of said door 6.

Said mirror stay 12 is fixed to said corner piece

14 and supports said mirror case 10 in a manner such that said mirror case 10 may by tilted back and forth relative to the car body 4.

The mirror case 10 is tiltably supported by said mirror stay 12 in order to assure that the mirror case 10 can absorb a shock by tilting when any person or any physical solid hits against said mirror case 10.

Swing of said mirror 8 can be electrically controlled from a driver's cab.

Reference numeral 30 designates a side back lamp adapted to be turned on a light in operative association with lighting of a back lamp 32 to illuminate either side of the hind part of the car body 4. This side back lamp 30 is provided in said lamp chamber 18 and comprises an electric bulb 34, a reflector 36 and a polarizing lens 38.

Said electric bulb 34 is connected to a switch 40 adapted to be turned on by shifting a shift lever (not shown) to its back position and turned on a light along with the back lamp 32 as said switch 40 is turned on.

Reference numeral 41 designates a battery to energize the side back lamp 30 as well as the back lamp 32.

Said reflector 36 functions to reflect light rays emitted rearward from the electric bulb 34 forward and thereby to enhance its illuminating efficiency. This reflector 36 is located within said lamp chamber 18 behind the electric bulb 34.

Said polarizing lens 38 is mounted in a locking groove 42 formed along the inner periphery of said lamp chamber 18 adjacent its open end with interposition of a seal member 44 and polarizes the light rays emitted from the

electric bulb 34 toward outer and lower part of the car body 4.

The first embodiment operates in a manner as follows:

In the nighttime, shifting of the shift lever (not shown) in order to back the car causes the switch 40 to be turned on and consequently the side back lamp 30 is turned on a light along with the back lamp 23 so that the light rays a emitted from the side back lamp 30 illuminate either side of the rear part of the car body 4.

In this manner, even in the nighttime, the door mirror 2 allows the driver to check up safety on either side of the rear part of the car body 4 during backing of the car without need to open the door 6 and the window 24 or need to leave the car or to rely on a fellows passenger.

The light rays a emitted from the side back lamp 30 are polarizes by the polarizing lens 38 off the cab so that the driver is neither dazzled nor prevented from looking at the mirror 8.

Now a second embodiment will be described in reference with Fig. 3.

This specific embodiment is distinguished from the first embodiment in that a louver board 46 is used as means serving to direct the light rays a emitted from said electric bulb 34 so as to illuminate either side of the rear part of the car body 4.

Reference numeral 48 designates a lens serving to regulate a diffusivity of the light rays a emitted from the electric bulb 34.

In this way, the light rays a emitted from the

electric bulb 34 is directed downward by the louver board 46 so as to illuminate either side of the rear part of the car body 4.

Apart from using the louver board in the place of the polarizing lens, the second embodiment is similar to the first embodiment in construction as well as in operation. Therefore, the similar parts are designated by the similar reference numerals and description thereof will not be repeated here.

While the invention has been described in detail with reference to the specific embodiments, as will be apparent to those skilled in the art in the light of the foregoing disclosure, many alterations and modifications are possible in the practice of this invention without departing from the spirit or scope thereof.

For example, a lamp case (corresponding to the lamp chamber) formed separately of the mirror case may be mounted on a lower or lateral part of the mirror case, instead of forming the side back lamp integrally with the mirror case.

The invention is not limited to the switch adapted to be turned on in operative association with shifting of the shift lever to its back position. Alternatively, the switch may be independently provided within the cab or operatively associated with lighting of the maker lamp, the head lamp or the like.

Finally, the side back lamp may employ a light emitting diode or the like instead of the electric bulb, or may include a plurality of electric bulbs.

(Effect of the invention)

As will be apparent from foregoing description, the invention allows the driver to check up safety on either side of the car tail even in darkness by means of the door mirror, since the side back lamp can be turned on a light by actuating the switch so as to illuminate either side of the car tail.

Incorporation of the side back mirror in the mirror case improves its appearance and reduces a possibility of breakage due to a shock when any person or any physical solid hits against it.

In addition to the advantages as have been described above, according to both the first embodiment and the second embodiment, the side back lamp can be turned on a light merely by shifting the shift lever to its back position and no operation of a switch provided exclusively for backing is required, since the switch for lighting of the side back lamp is adapted to be turned on in operative association with said operation of the shift lever.

Moreover, the side back lamp being put on a light neither dazzles the driver nor prevents the driver from looking at the mirror. Thus, the door mirror is very convenient to use.

Furthermore, the illuminating angle of the side back mirror is not affected by the mirror angle regulation, since this regulation is performed by the electric motor mounted in the mirror case without movement of the mirror case itself.

4. BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view of a door mirror according to a first embodiment of the invention;

Fig. 2 is a sectional view taken along a line I - I in Fig. 1;

Fig. 3 is a sectional view of a door mirror according to a second embodiment of the invention; and

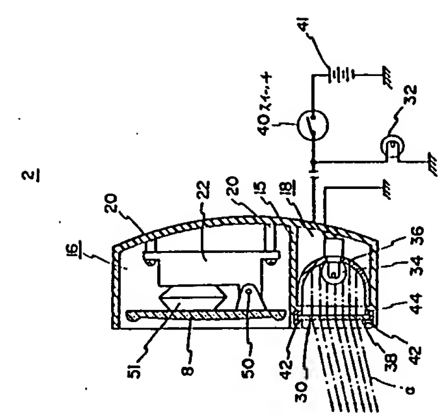
Fig. 4 is a perspective view showing a door mirror of prior art.

IDENTIFICATION OF REFERENCE NUMERAL USED IN THE DRAWINGS

2	door mirror
4	car body
6	door
8	mirror
10	mirror case
30	side back lamp
40	switch

Applicant

NISSAN SHATAI CO. LTD.



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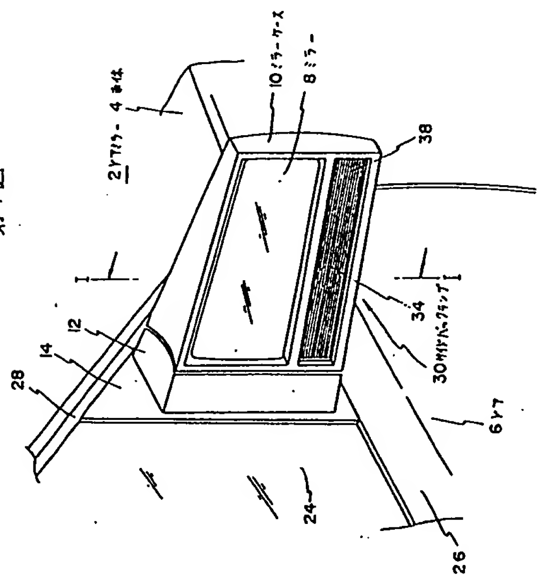

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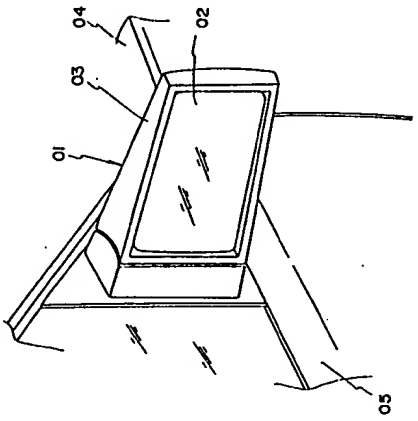
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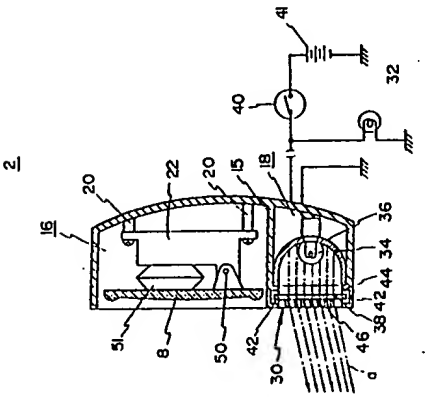
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